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National Science Board

NATIONAL SCIENCE BOARD
4201 Wilson Boulevard
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January 15, 2002

The Honorable George W. Bush
The President of the United States
The White House
Washington, DC 20500

Dear Mr. President:

It is my honor to transmit to you, and through you to the Congress, the fifteenth in the series of biennial Science Indicators reports, *Science and Engineering Indicators – 2002*. The National Science Board submits this report in accordance with Sec. 4(j)1 of the National Science Foundation Act of 1950, as amended.

The Science Indicators series was designed to provide a broad base of quantitative information about U.S. science, engineering, and technology for use by public and private policymakers. Because of the spread of scientific and technological capabilities around the world, this report presents a significant amount of material about these international capabilities and analyzes the U.S. position in this broader context.

Science and Engineering Indicators – 2002 contains quantitative analyses of key aspects of the scope, quality, and vitality of the Nation's science and engineering enterprise. The report presents material on science, mathematics, and engineering education from the elementary level through graduate school and beyond; the scientific and engineering workforce; U.S. and international R&D performers, activities, and outcomes; U.S. competitiveness in high technology; public attitudes and understanding of science and engineering; and the significance of information technologies for science and for the daily lives of our citizens in schools, the workplace, and the community. An overview chapter presents the key themes emerging from these analyses.

Much in this report demonstrates that science thrives on the open flow of ideas. The scientific community values reason, experimentation, and evidence, and it transcends national boundaries and cultural and political differences. In the wake of the events of September 11, which demonstrated that the enemies of openness stand ready to subvert science and technology for malevolent ends, preserving and enhancing open scientific discourse becomes an acute concern. However, it is the proponents of openness, not its enemies, who are in the best position to exploit the fruits of science.

I hope that you, your Administration, and the Congress will find the new quantitative information and analysis in the report useful and timely for informing thinking and planning on national priorities, policies, and programs in science and technology.

Respectfully yours,

A handwritten signature in black ink that reads "Eamon M. Kelly". The signature is written in a cursive, flowing style with a large, stylized "K" at the end.

Eamon M. Kelly
Chairman

Acknowledgments

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Primary responsibility for the production of the volume was assigned to the Science and Engineering Indicators Program under the direction of Rolf Lehming, Division of Science Resources Statistics (SRS); Lynda Carlson, Division Director; Mary J. Frase, Deputy Division Director.

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